

1. Choose the right answer

الاسم:

- a. The master production schedule(MPS) is
 - i. a delivery plan.
 - ii. production schedule.
 - iii. detailed production plan.
- b. The MRP system determines
 - i. Material requirements and timings for each phase of productin.
 - ii. Material requirements for each phase of productin.
 - iii. Material requirements and timings for the productin.

2. Develop a zero inventory plan for the following demand forecast

period \	1	2	3	4	5	6	total
days	22	21	24	22	23	25	
Units/worker							
Demand (units)	2800	3300	3500	3000	2300	2500	17400
Workers needed							
Workers available	35						
Workers hired							
workers							
Workers used							
Hiring cost							
Lay off cost							
Units produced							
Net inventory							
Labor cost							
Holding cost							
Back order cost							
Total cost							

Lay off cost = L.E. 600/worker

backorder cost = L.E. 10/unit /period

Wages and beneits = L.E. 100/worker/day

Production = 5units/worker/day.

Hiring cost = L.E. 500/worker

holding L.E. 5/unit/period

Hiring cost = L.E. 500/worker

3. Develop an MPS for the following batch production policy

Current inventory =2000 units	period							
	1	2	3	4	5	6	7	8
Forecasting (units)	1000	1100	1100	1000	2000	2100	2100	1800
Ordering (units)	900	1200	900	900	1800	1800	2000	2000
Inventory (units)								
MPS (units)								
Available to promise (units)								

Final inventory =750 units

4. Develop a transportation model for the following production planning problem.

Initial inventory = 100 units,

final inventory =150 units

period	1	2	3
Production capacity	400	420	500
demand	400	450	430
Production cost	1000	1200	1200
Inventory cost	200	300	500